

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-20 are now in the application. Claims 1 and 19 have been amended. Claim 20 has been added. Claims 7-18 have been withdrawn from consideration.

In "Claim Rejections - 35 USC § 103", item 3 on pages 2-4 of the above-identified Office Action, claims 1-4 and 19 have been rejected as being obvious over the prior art cited by applicant (Fig. 1) in view of U.S. Patent No. 5,351,317 to Weber, under 35 U.S.C. § 103(a).

In "Claim Rejections - 35 USC § 103", item 4 on pages 4-5 of the above-identified Office Action, claim 5 has been rejected as being obvious over the prior art cited by applicant (Fig. 1) in view of Weber and U.S. Patent No. 4,998,793 to Henry, under 35 U.S.C. § 103(a).

In "Claim Rejections - 35 USC § 103", item 5 on page 5 of the above-identified Office Action, claim 6 has been rejected as being obvious over the prior art cited by applicant (Fig. 1) in view of Weber and U.S. Patent No. 5,917,628 to Ooi, under 35 U.S.C. § 103(a).

The rejections have been noted and claim 1 has been amended and claim 20 has been added in an effort to even more clearly define the invention of the instant application.

More specifically, claim 1 has been amended to call for "said polarization converter causing the two frequency bands to be polarized orthogonally when combined in said at least one frequency recombination unit." Original claim 19 called for "recombining the two frequency bands transmitted in the two Mach-Zehnder arms and polarized orthogonally with respect to one another during the combining." New claim 20 is similar to claim 19, but includes several features of claim 1 and calls for "providing a polarization converter in at least one of the two Mach-Zehnder arms and recombining the two frequency bands transmitted in the two Mach-Zehnder arms in at least one frequency recombination unit, causing the two frequency bands to be polarized orthogonally with respect to one another during the combining."

Therefore, each of the independent claims 1, 19 and 20 call for the two frequency bands being polarized orthogonally when combined in the frequency combination unit. In addition, claims 1 and 20 specifically mention the polarization converter.

Support for the amendment to claim 1 and new claim 20 can be found in original claim 19 and on page 8, lines 11-18, page 14, line 22 to page 15, line 5 and page 20, lines 19-24 of the specification, as well as the Abstract, of the instant application.

As will be explained below, it is believed that original claim 19, amended claim 1 and new claim 20 are patentable over the cited art.

The Examiner has indicated in the paragraph bridging pages 2 and 3 of the Office action that the prior art cited by applicant (Fig. 1) does not show a polarization converter in at least one of the transmission links. The Examiner goes on to state that Weber shows such a polarization converter in at least one of the transmission links. More specifically, the Examiner is referring to the polarization rotators 40 shown in Fig. 4 and discussed in column 4, lines 58-67 of Weber.

However, in the rejection of claims 1-4 and 19 in item 3 of the Office action, the Examiner makes no mention of claim 19 specifically, nor the step of "recombining the two frequency bands transmitted in the two Mach-Zehnder arms and polarized orthogonally with respect to one another during the combining", as recited in original claim 19. As mentioned

above, claims 1 and 20 also call for orthogonal polarization as well as the polarization converter and the frequency recombination unit, causing the two frequency bands to be polarized orthogonally with respect to one another during the combining.

Clearly, neither the prior art cited by applicant (Fig. 1), nor Weber show the polarization converter, the frequency recombination unit and the orthogonal polarization as recited in claims 1 and 20 of the instant application, nor the orthogonal polarization of claim 19. The Henry and Ooi references do not make up for the deficiencies of the prior art cited by applicant (Fig. 1) and Weber.

The dispersion compensator and method as claimed in the instant application have the surprising effect of compensating for high dispersion values while having high bandwidth without cascading multiple filters. See, for example, page 8, lines 11-18 of the specification of the instant application.

Weber teaches away from the invention as claimed in the instant application. In Weber no hint can be found for solving the problem of dispersion compensation. Weber teaches the introduction of an element 40 that rotates the polarization of the light by 90° into the middle of each

branch of the wave guide, so that the device is symmetrical with respect to the polarization element.

In a dispersion compensator and method as claimed in the instant application, a polarization converter is only needed in one transmission link so that the dispersion compensator is asymmetrical. Furthermore, in Weber no hint can be found for solving the problem of a high value dispersion compensation while having a high value dispersion bandwidth.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1 and the steps of claims 19 and 20. Claims 1, 19 and 20 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

Rejoinder of the withdrawn claims 7-18 which are all ultimately dependent on claim 1 is also solicited.

In view of the foregoing, reconsideration and allowance of claims 1-20 are solicited.

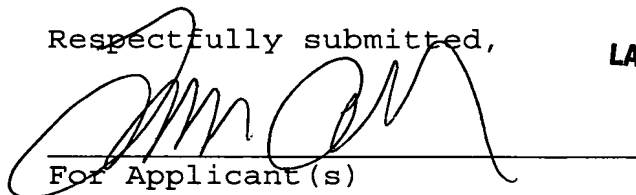
Appl. No. 09/845,855
Amdt. dated October 19, 2004
Reply to Office action of May 20, 2004

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of two months pursuant to Section 1.136(a) in the amount of \$430.00 in accordance with Section 1.17 is enclosed herewith.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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